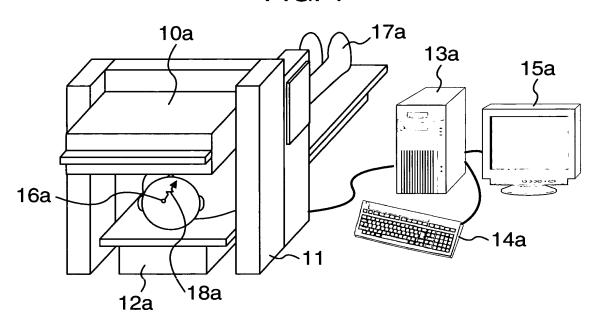
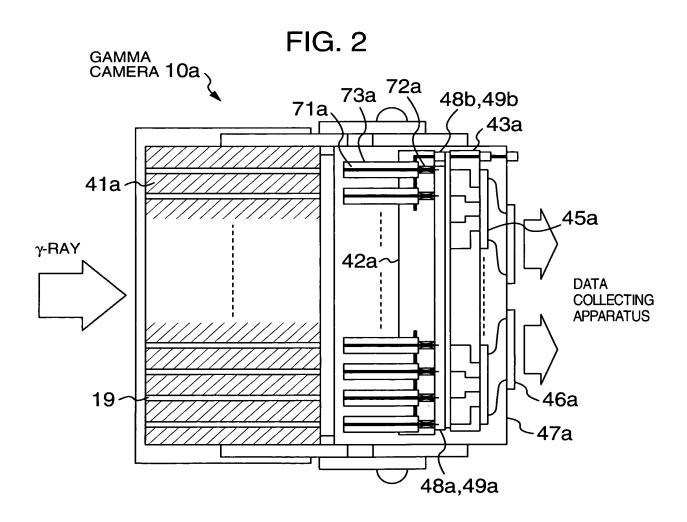
Inventor: Katsutoshi Tsuchiya, et al.

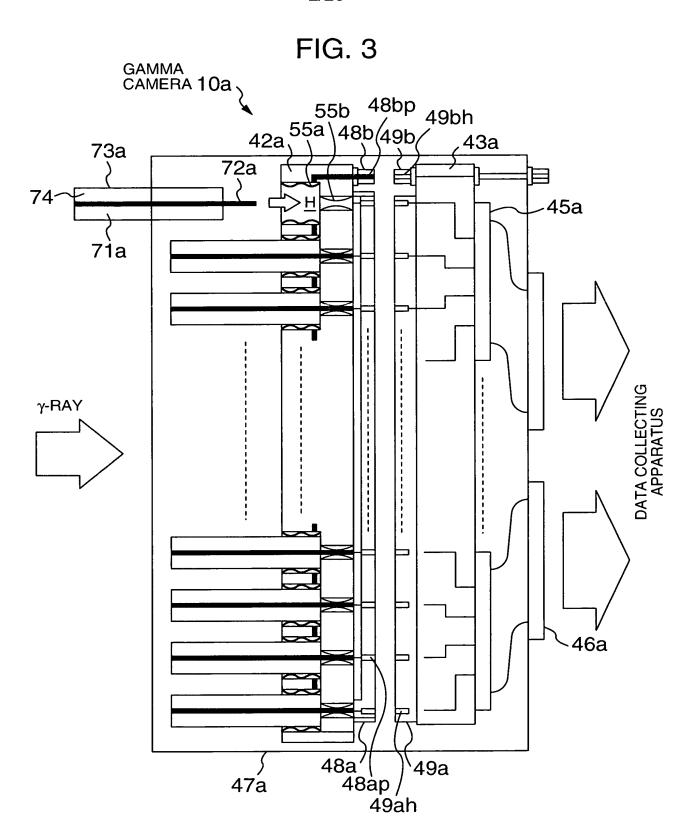
Title: RADIATION DETECTOR, RADIATION DETECTOR ELEMENT, AND RADIATION IMAGING APPARATUS

FIG. 1

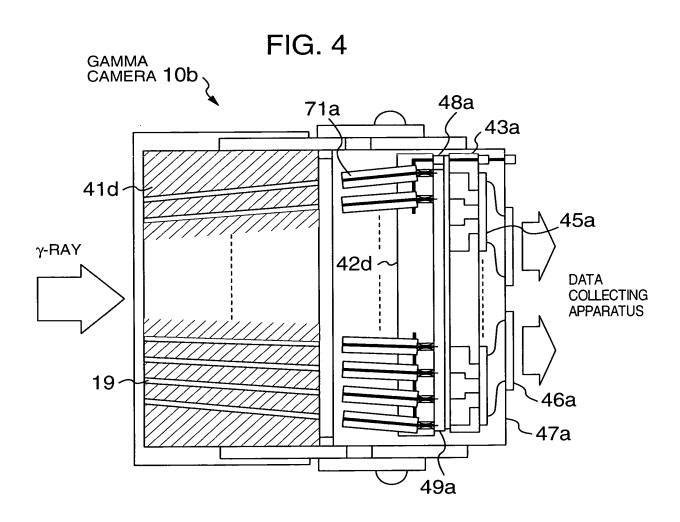




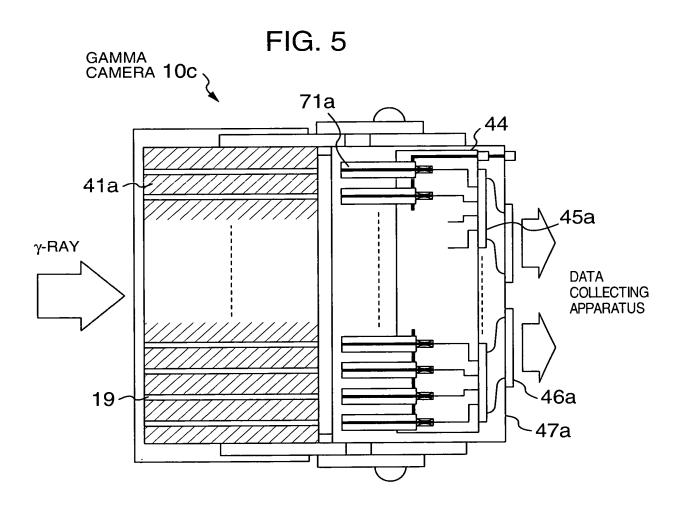
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Inventor: Katsutoshi Tsuchiya, et al.
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ELEMENT, AND RADIATION IMAGING APPARATUS



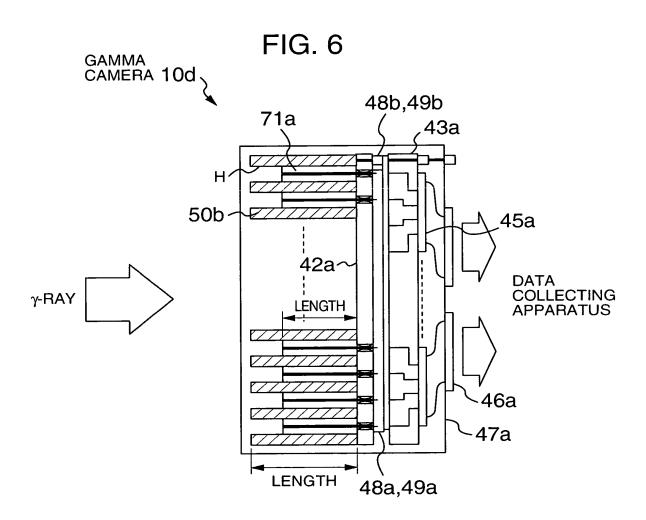
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Inventor: Katsutoshi Tsuchiya, et al.
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Title: RADIATION DETECTOR, RADIATION DETECTOR
ELEMENT, AND RADIATION IMAGING APPARATUS



Docket No.: A8319.0025/P025 App No.: Not Yet Assigned

Inventor: Katsutoshi Tsuchiya, et al.

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ELEMENT, AND RADIATION IMAGING APPARATUS

FIG. 7

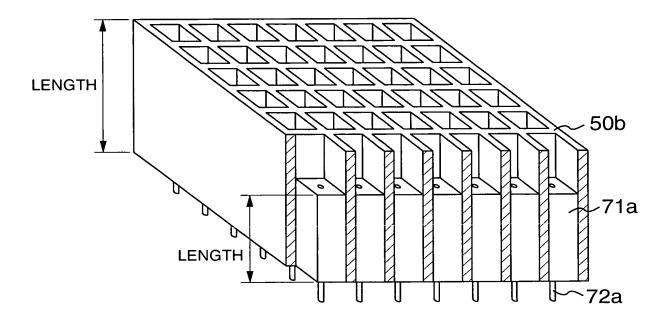
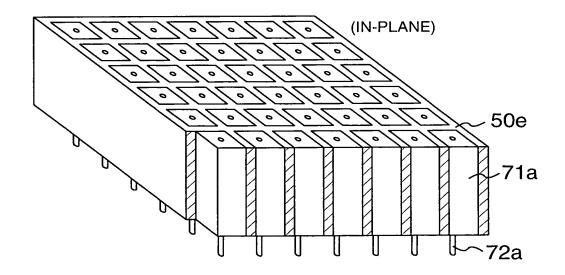


FIG. 8



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FIG. 9

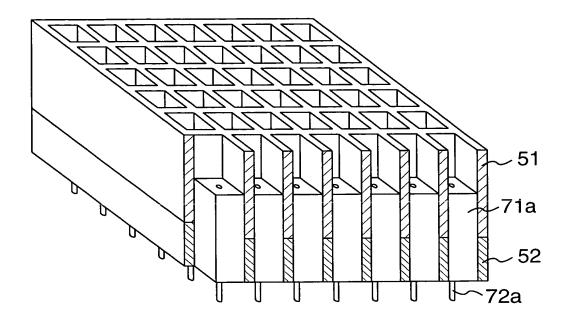
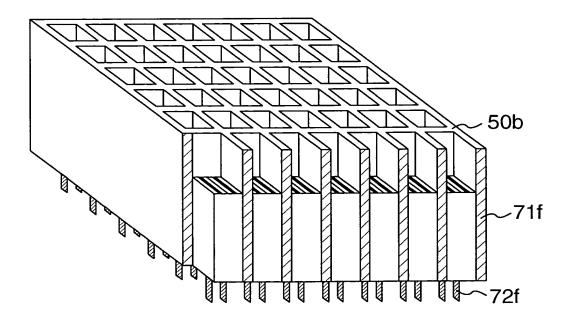


FIG. 10



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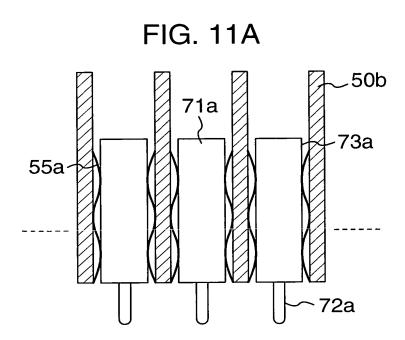
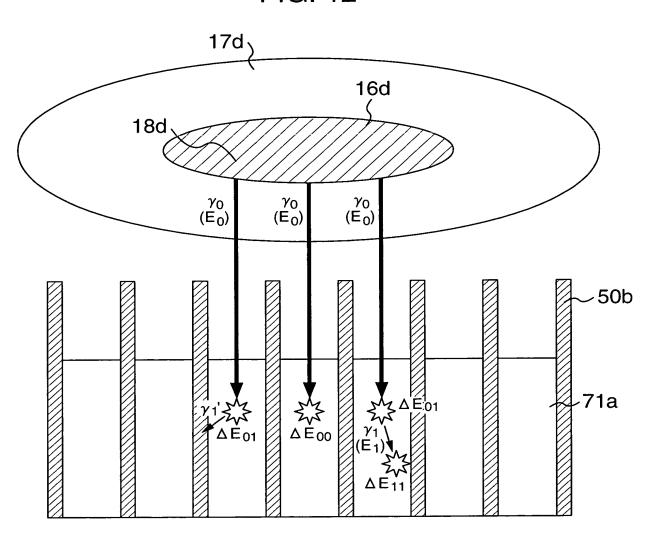


FIG. 11B _50b 71e -73f 55a-

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FIG. 12

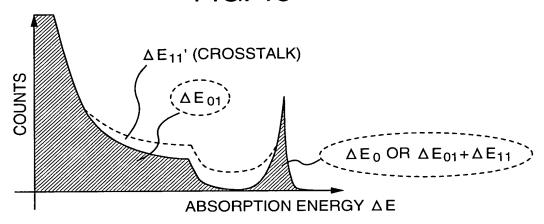


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FIG. 13



 γ_0 (E₀) : DIRECT γ -RAY FROM γ -RAY SOURCE

 γ_1 (E₁): SCATTERED RADIATION IN DETECTOR

 γ_1 ' (E₁): SCATTERED RADIATION TO ADJACENT CELL (CROSSTALK)

 ΔE_{00} : PHOTOELECTRIC ABSORPTION OF DIRECT γ -RAY (TOTAL ABSORPTION) (= E_0)

 ΔE_{01} : ENERGY OF RECOIL ELECTRONS DUE TO COMPTON SCATTERING (= $E_0 - E_1$)

 ΔE_{11} : PHOTOELECTRIC ABSORPTION OF SCATTERED RADIATION (=E₁)

ΔE₁₁': PHOTOELECTRIC ABSORPTION OF SCATTERED RADIATION TO

ADJACENT CELL (CROSSTALK)

FIG. 15 $\Delta E_{11}' \text{ (CROSSTALK)}$ $\Delta E_{00} \text{ OR } \Delta E_{01} + \Delta E_{11}$

ABSORPTION ENERGY AE

 γ_0 (E $_0$) : DIRECT γ -RAY FROM γ -RAY SOURCE

 γ_1 (E₁): SCATTERED RADIATION IN DETECTOR

 γ_1 ' (E₁): SCATTERED RADIATION TO ADJACENT CELL (CROSSTALK)

 ΔE_{00} : PHOTOELECTRIC ABSORPTION OF DIRECT γ -RAY (TOTAL ABSORPTION) (= E_0)

 $\Delta\,E_{01}$: ENERGY OF RECOIL ELECTRONS DUE TO COMPTON SCATTERING (= $E_0\,-E_1$)

 ΔE_{11} : PHOTOELECTRIC ABSORPTION OF SCATTERED RADIATION (= E_1)

 ΔE_{11} ': PHOTOELECTRIC ABSORPTION OF SCATTERED RADIATION TO

ADJACENT CELL (CROSSTALK)

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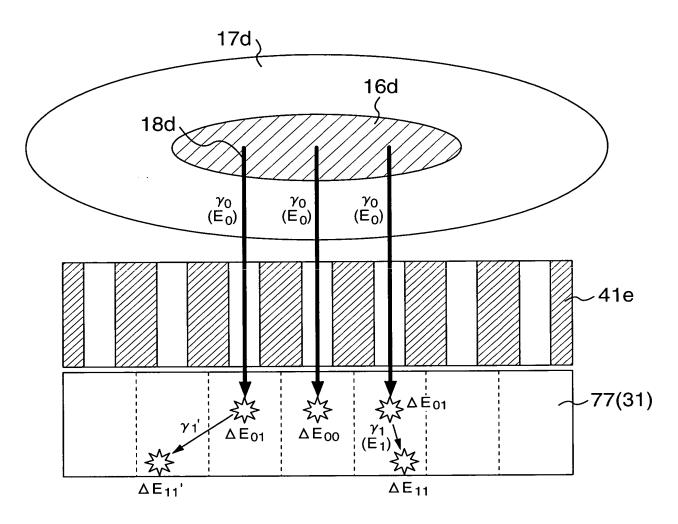
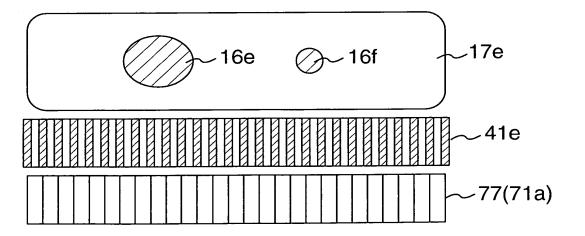


FIG. 16A



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FIG. 16B

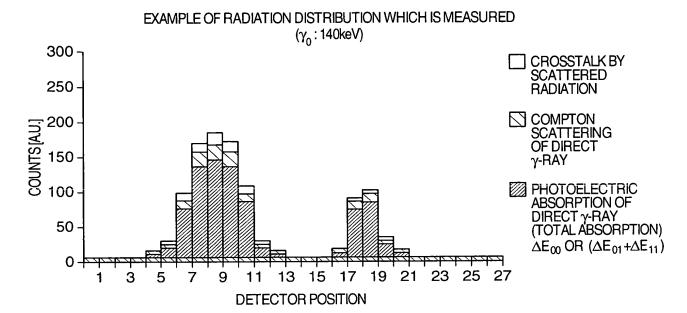
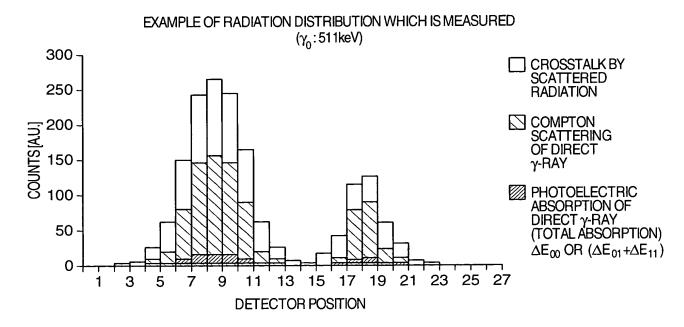
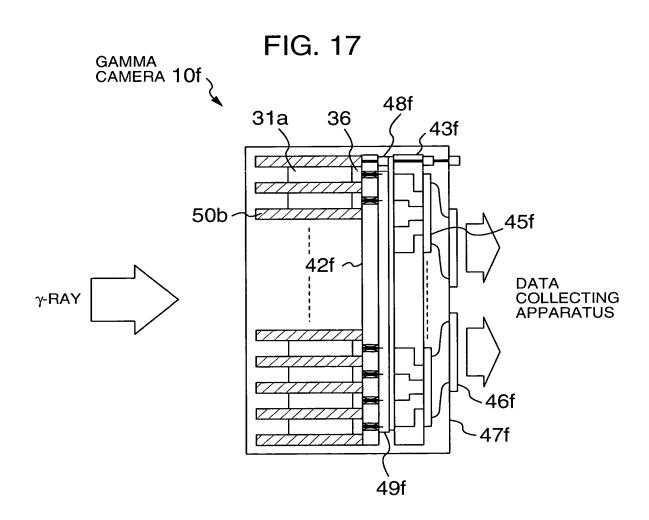


FIG. 16C



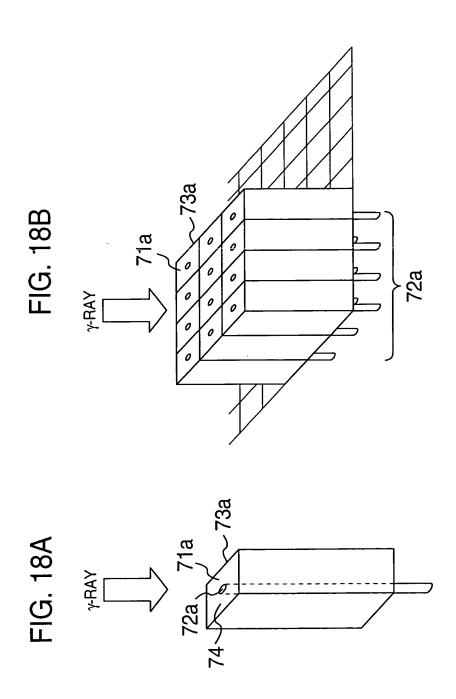
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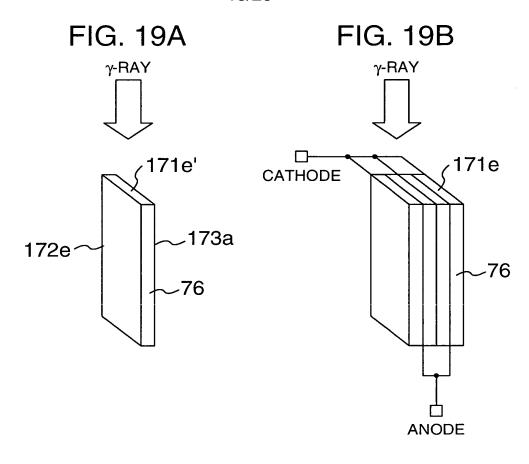
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71b' 72b 71b 72b 75a 75a 75a

FIG. 20C

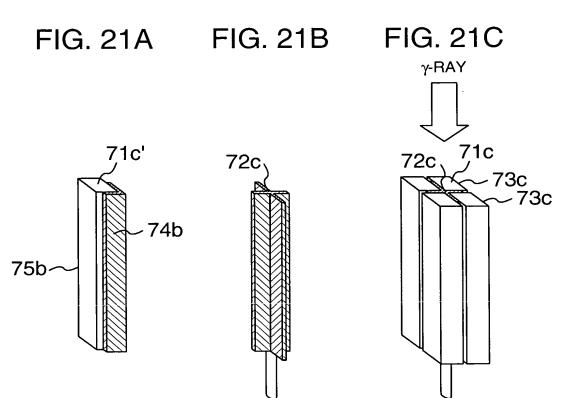
72b

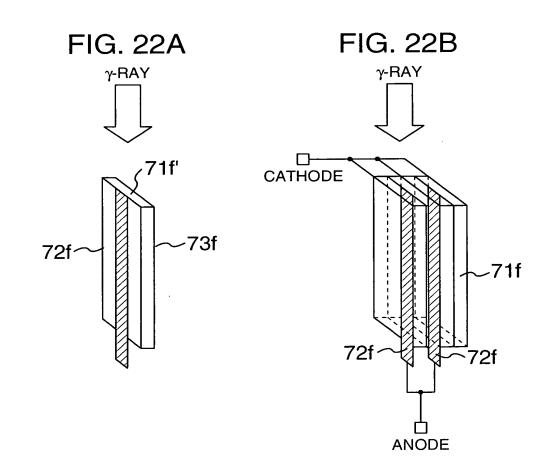
FIG. 20A FIG. 20B

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FIG. 23

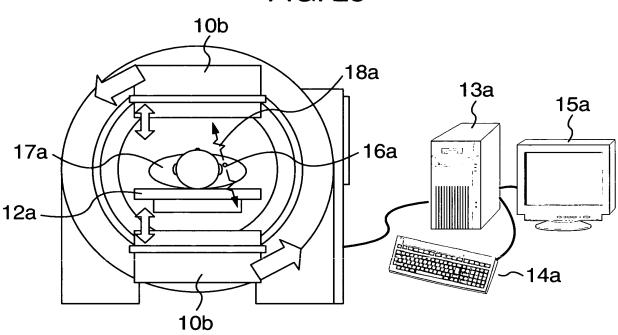
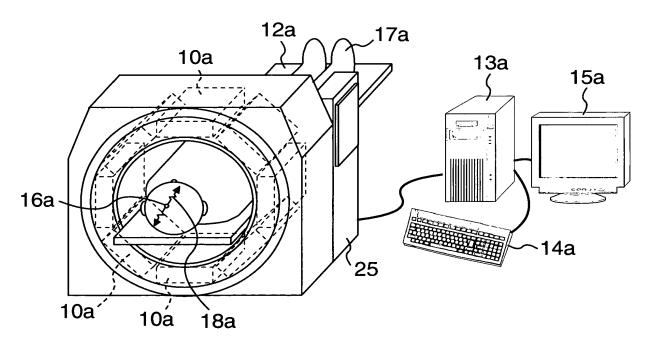
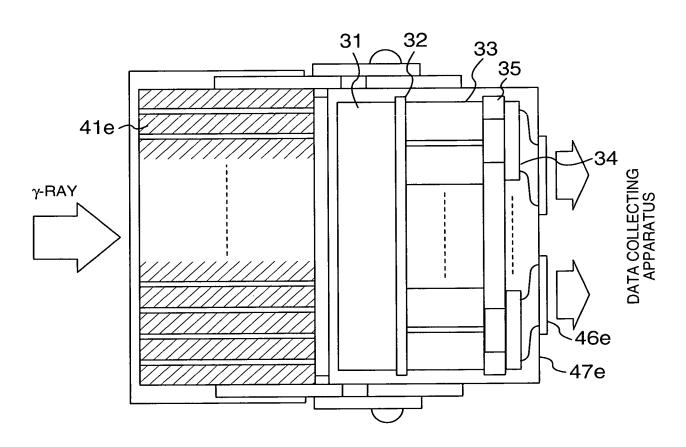


FIG. 24

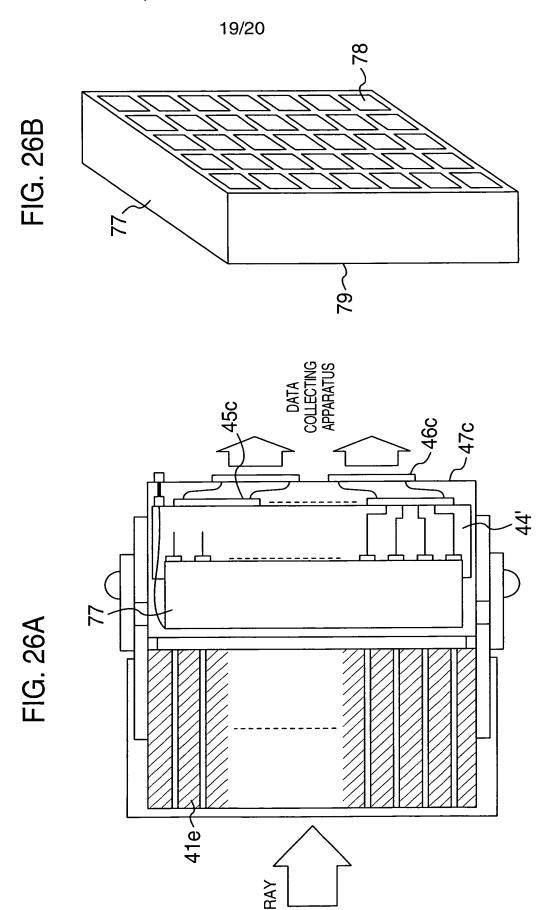


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FIG. 25



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FIG. 27

